



Water-Data Report 2008

## 01401000 STONY BROOK AT PRINCETON, NJ

RARITAN RIVER BASIN

LOCATION.--Lat 40°19'59", long 74°40'55" referenced to North American Datum of 1983, Princeton Township, Mercer County, NJ, Hydrologic Unit 02030105, on right bank, 10 ft downstream from bridge on U.S. Highway 206, 1.6 mi southwest of Princeton, and 4.0 mi upstream from Carnegie Lake.

DRAINAGE AREA.--44.5 mi<sup>2</sup>.

### SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1953 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 62.23 ft above NGVD of 1929 (levels from New Jersey Geological Survey benchmark).

REMARKS.--Records good, except for estimated daily discharges, which are fair. Since July 1959 some regulation by several small reservoirs, combined capacity, 49,800,000 gal. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft<sup>3</sup>/s and (or) maximum (\*):

[a, peak obtained from crest-stage gage; e, estimated]

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb 2	0015	1,900	5.58
Feb 13	1800	*4,370	*a8.90
Mar 8	2000	2,920	e7.00
Mar 20	0845	2,170	5.96

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**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**  
**DAILY MEAN VALUES**

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.67	7.2	10	113	424	62	39	29	39	4.0	5.4	1.9
2	0.66	6.4	9.0	82	503	64	43	25	23	3.3	4.3	1.2
3	0.67	5.7	59	44	113	53	32	22	17	3.1	3.5	0.91
4	0.80	5.0	43	38	81	51	72	21	63	2.9	2.4	0.68
5	0.83	4.2	23	38	71	376	74	20	172	3.2	2.2	0.52
6	0.87	5.7	16	37	71	135	48	18	51	8.7	2.9	e114
7	0.83	6.2	14	37	68	116	38	16	34	8.1	2.1	e282
8	0.84	6.4	14	36	53	e1,290	35	15	26	5.5	1.6	24
9	1.1	5.7	13	34	45	e507	32	59	20	4.6	2.0	16
10	4.1	5.2	23	30	49	161	31	111	15	3.7	1.4	26
11	6.6	4.5	23	87	33	113	29	44	15	3.1	5.8	12
12	4.8	4.0	19	112	27	95	203	44	13	2.8	3.1	11
13	1.9	5.0	33	56	e1,780	76	79	75	10	2.1	2.3	21
14	2.8	4.3	123	78	483	67	52	37	12	3.1	4.5	15
15	2.6	7.2	81	71	162	64	41	28	72	2.6	20	9.8
16	2.1	12	446	56	118	59	36	159	23	2.6	9.8	6.2
17	1.7	11	177	44	87	52	32	198	14	1.9	4.8	4.9
18	1.5	8.1	61	250	225	45	31	90	10	1.8	3.2	4.3
19	3.4	7.7	43	135	179	134	28	117	9.5	1.5	2.5	3.6
20	3.7	8.8	36	75	91	784	25	93	10	1.3	1.8	3.2
21	3.6	14	31	44	69	146	24	171	7.8	1.7	1.5	2.6
22	3.1	9.8	27	42	67	94	22	75	6.6	1.3	1.5	2.3
23	2.4	9.4	78	40	72	74	20	55	6.0	33	1.0	2.1
24	2.1	7.4	392	33	64	64	19	41	5.6	298	0.86	2.1
25	4.8	6.1	79	27	73	56	17	33	5.0	37	0.86	1.9
26	5.4	17	53	27	99	52	15	28	4.8	15	0.80	10
27	272	42	75	25	163	48	15	28	4.2	10	0.65	8.8
28	81	24	59	23	92	47	41	63	8.2	11	0.89	24
29	22	15	264	23	57	41	124	30	7.8	9.8	0.68	154
30	12	12	107	28	---	34	44	23	5.3	7.8	5.6	27
31	9.3	---	268	30	---	31	---	27	---	6.3	1.8	---
<b>Total</b>	460.17	287.0	2,699.0	1,795	5,419	4,991	1,341	1,795	709.8	500.8	101.74	793.01
<b>Mean</b>	14.8	9.57	87.1	57.9	187	161	44.7	57.9	23.7	16.2	3.28	26.4
<b>Max</b>	272	42	446	250	1,780	1,290	203	198	172	298	20	282
<b>Min</b>	0.66	4.0	9.0	23	27	31	15	15	4.2	1.3	0.65	0.52
<b>Cfsm</b>	0.33	0.21	1.96	1.30	4.20	3.62	1.00	1.30	0.53	0.36	0.07	0.59
<b>In.</b>	0.38	0.24	2.26	1.50	4.53	4.17	1.12	1.50	0.59	0.42	0.09	0.66

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	33.5	56.3	92.8	97.0	106	132	108	61.5	38.3	31.4	27.9	29.9
<b>Max</b>	236	212	363	319	203	337	362	216	259	216	240	210
<b>(WY)</b>	(2006)	(1973)	(1997)	(1996)	(1971)	(1994)	(2007)	(1989)	(2003)	(1975)	(1955)	(1999)
<b>Min</b>	1.00	1.50	1.94	3.22	15.8	25.7	20.9	8.95	2.67	0.56	0.14	1.31
<b>(WY)</b>	(1958)	(1966)	(1999)	(1981)	(2002)	(2006)	(1985)	(1963)	(1957)	(1957)	(1966)	(1970)

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SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1954 - 2008	
<b>Annual total</b>	26,474.08		20,892.52			
<b>Annual mean</b>	72.5		57.1		67.7	
<b>Highest annual mean</b>					118	1996
<b>Lowest annual mean</b>					28.5	1966
<b>Highest daily mean</b>	3,330	Apr 16	<sup>a</sup> 1,780	Feb 13	3,730	Sep 16, 1999
<b>Lowest daily mean</b>	0.66	Sep 30	0.52	Sep 5	0.00	Aug 5, 1966
<b>Annual seven-day minimum</b>	0.71	Sep 28	0.76	Oct 1	0.00	Aug 5, 1966
<b>Maximum peak flow</b>			4,370	Feb 13	<sup>b</sup> 8,960	Aug 28, 1971
<b>Maximum peak stage</b>			8.90	Feb 13	14.26	Aug 28, 1971
<b>Instantaneous low flow</b>			0.49	Sep 5	0.00	Aug 5, 1966
<b>Annual runoff (cfsm)</b>	1.63		1.28		1.52	
<b>Annual runoff (inches)</b>	22.13		17.47		20.66	
<b>10 percent exceeds</b>	114		116		143	
<b>50 percent exceeds</b>	15		23		22	
<b>90 percent exceeds</b>	2.0		1.9		2.1	

<sup>a</sup> Estimated.

<sup>b</sup> From rating extended above 4,000 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow.

<sup>c</sup> From peak obtained from crest-stage gage.

